

M/057/002

## GREAT SALT LAKE MINERALS &amp; CHEMICALS CORPORATION

P.O. Box 1190

Ogden, Utah 84402

TWX (910) 971-5910

TEL (801) 731-3100

Plant Site: Little Mountain, Utah

FAX: (801) 731-4881

Toll Free (800) 453-4519

RECEIVED

JUL 05 1991

DIVISION OF  
OIL GAS & MINING

July 3, 1991

MAX J. REYNOLDS  
VICE PRESIDENT - OPERATIONS

Tony Gallegos  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
355 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Dear Mr. Gallegos:

Submitted herewith is the Notice of Intention to Amend Mining Operations at Great Salt Lake Minerals & Chemicals Corp. This will constitute an amendment to the existing Mine Reclamation Plan File No. M-057-002.

Great Salt Lake Minerals & Chemicals Corp. proposes to expand its solar pond system. The expansion includes (1) dredging an underwater channel approximately 20 miles long in the north arm of the Great Salt Lake from the west side of Promontory to Lakeside, Utah; (2) constructing an 8.5 mile dike from Strong's Knob near Lakeside, Utah to the Finger Point Mountain; (3) constructing an access road approximately 3 miles long from the Lakeside railroad north to Strong's Knob; and (4) constructing a pumping station on the new dike for pumping brine in and out of the proposed solar evaporation pond. Details of the project and areas that will be disturbed are included in the attached Notice of Intentions to Revise Mining Operations as per Form MR-REV.

It should be noted that the following shows the status of necessary leases, easements and permits required by the State of Utah and Federal government for the project.

State of Utah--Division of Lands &amp; Forestry

--Mineral lease for solar pond ML 44607 approved 17 June 1991.

--Lake Channel Easement No. 95 approved 17 June 1991.

--Access Road Easement application approval pending.

--Borrow Material Permit approval pending.

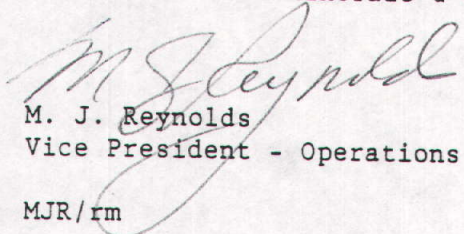
Department of the Army Permit No. 199 100 106 pending approval. The Department of the Army has made an environmental assessment that should satisfy the impact assessment rule. Details are included herein.



Construction of the dike is scheduled to begin by August 15, 1991. Your immediate attention to this request will be appreciated. If there are any questions, please call Ken Glauser at (801) 732-3300.

Sincerely,

Great Salt Lake Minerals & Chemicals Corporation



M. J. Reynolds  
Vice President - Operations

MJR/rm

MJR/rm



RECEIVED

DEPARTMENT OF THE ARMY PERMIT EVALUATION JUL 05 1991

AND DECISION DOCUMENT

DIVISION OF  
OIL GAS & MINING

Applicant: GREAT SALT LAKE MINERALS  
AND CHEMICALS CORP.

Application No: 199100106

ITEM 3 OF 4

This document constitutes my Environmental Assessment, Statement of Findings and review and compliance determination according to the 404(b)(1) guidelines for the proposed work (applicant's preferred alternative) described in the attached public notice.

I. Proposed Project: The location and description of work are described in the attached public notice. (Any modifications since the public notice are described below, including any mitigation measures proposed by the applicant subsequent to the public notice.)

II. Environmental and Public Interest Factors Considered:

A. Purpose and need: The purpose is to concentrate the brine from the Great Salt Lake (GSL) within the new pond by solar evaporation and flow the concentrated brine in the underwater channel across the lake to the Great Salt Lake Minerals (GSLM) existing pump station. The brine will flow into GSLM's existing solar pond complex for production of sulfate of potash and other minerals. This work is required to compensate for dilution of the northern lake brine because of the breach in the railroad causeway and for GSLM to maintain profitable operations.

B. Alternatives (33 CFR 320.4(b)(4), 40 CFR 230.10):

(1) No action - The no action alternative would not have an adverse effect on the aquatic ecosystem. However, this would not alleviate the need to obtain the denser brines to maintain a profitable operations.

(2) Other project designs (smaller, larger, different, etc.) (also discuss appropriate mitigation measures for these designs.) - No other project designs were submitted by the applicant. Another project design would be to lay a pipeline and pump the dense brine into the solar evaporation ponding system. The cost of installing the pipeline and pumps make this alternative less practical.

(3) Other sites available to the applicant (40 CFR 230.10) - There are approximately 4 miles of channel that have already been constructed. The new channel will be a continuation of the existing channel. The proposed channel will extend from GSLM pump Station #1 on Promontory Point west across the lake to Strong's Knob. Since the channel is a continuation of an



existing channel and pump, there are no other practicable sites for the construction of the channel. The pond expansion on the west of the Great Salt Lake is the only suitable place to acquire the required pond acreage for GSLM to reach its production goals. There are no other practicable sites to obtain the dense brine.

(4) Other sites not available to the applicant - There are no other sites practicable to the applicant where this project could be built since the channel will be a continuation of an existing channel and the pond expansion area on the west of the Great Salt Lake is the only suitable place to acquire the required pond acreage.

(5) Corps' preferred alternative - The Corps selected alternative is to issue a Department of the Army permit as proposed with inclusion of the following special conditions:

1. The spoil pile created by the discharge of the dredged material will have 350 foot breaks in it every 3000 feet in the deepest 5 mile portion of the lake. This will be accomplished by placing no dredged material from the channel excavation in these 350 foot sections. This is to provide an open lake bottom to prevent any interference with the natural interchange of brine shrimp between the north and south arms of the lake.

2. The Great Salt Lake Minerals and Chemicals Corp. will provide access across their dike to shrimpers. This to provide the brine shrimp companies that harvest shrimp in these areas access to the shrimping waters.

3. The permittee will contact Mr. Anthony Vigil of the U.S. Army Corps of Engineers, two weeks before construction starts to set up a preconstruction meeting. This meeting will be to clarify any questions and determine boundaries of fill to be placed.

4. The Great Salt Lake Minerals and Chemicals Corp. shall submit "as built" drawings of the completed work to the Army Corps of Engineers.

C. Physical/chemical characteristics and anticipated changes (check applicable blocks and provide concise description of impacts for proposed action and alternatives):

( X ) substrate - From the applicants existing pump station twenty miles across the lake is now open water with a flat lake bottom. This area will be excavated. The substrate will change to a 20 mile channel with an eight to thirty four foot depth and the width varies thirty to one hundred and ten feet. The dredged material will be discharged approximately 2000 feet from the channel centerline. The material will be discharged over the twenty miles. The material that would be discharged would be approximately 2 to 3 feet high. From Strong's Knob to the Finger Point Mountain a dike would be constructed with a twenty eight foot top width with 1.5 to 1 side



slopes and approximately 8 feet high. This will cover the existing lake bottom sediments with dredged material and will have a long-term impact on the substrate.

The pipeline alternative would also require that a certain amount to substrate area be covered with fill material. This would also have a long-term impact but it would effect less substrate area than the channel alternative.

( X ) currents, circulation or drainage patterns - The currents and circulation patterns will change along the channel and the dredged material disposal dike. The applicant will leave 350 foot openings in the deepest areas along the 20 miles. This would lessen the impacts to the currents along these areas. The purpose of the project is to change the circulation pattern so that the heavier dense brines can be better utilized in mineral production. The channel dredging should not change the drainage patterns. The area where the dike would be constructed is now mud flat. During high water years the dike will change currents and circulation patterns in this area. The dike will prevent water from entering the solar pond. The channel and pond will provide an adequate system should the lake increase in elevation. This would then be a long-term impact on the circulation pattern.

( X ) suspended particulates; turbidity - There would be a release of suspended particulates during the construction of the dike and channel. However, these particulates should dissipate shortly after the work is completed. Some areas where the dike will be constructed are mudflats and do not have standing water. This impact will be minor and temporary.

( X ) water quality (temperature, salinity patterns and other parameters) - The construction of the dike would impact the salinity patterns. The propose of the pond is to concentrate the brine from the Great Salt Lake by solar evaporation and flow the concentrated brine in the underwater channel across the Great Salt Lake. While the concentrated brine is being pumped across the lake there would be a change in salinity patterns along the channel. During construction, the turbidity would degrade the water quality, but this impact will be minor and temporary.

( X ) flood control functions - With the construction of the dike there would be less storage area; however, GSLM has agreed with the state to let water enter the evaporation pond during high water. They would remove any part of the dike necessary to get water to the Great Salt Lake pumps. The dike will be constructed to an elevation of 4205. There are lower elevations around the dike where water could flow into the evaporation pond and to the pumps. The construction of the channel should not have an impact on the flood control functions.

( ) storm, wave and erosion buffers -

( ) erosion and accretion patterns -



( ) aquifer recharge -

( ) baseflow -

Additionally, for projects involving the discharge of dredged material:

( X ) mixing zone, in light of the depth of water at the disposal site; current velocity, direction and variability at the disposal site; degree of turbulence; water column stratification; discharge vessel speed and direction; rate of discharge; dredged material characteristics; number of discharges per unit of time; and any other relevant factors affecting rates and patterns of mixing. In this section of the Great Salt Lake there are virtually no fish and plants. Therefore, the discharge of dredged material should only have a minor negative impact.

D. Biological characteristics and anticipated changes (check applicable blocks and provide concise description of impacts for proposed action and alternatives):

( X ) special aquatic sites (wetlands, mudflats, coral reefs, pool and riffle areas, vegetated shallows, sanctuaries and refuges, as defined in 40 CFR 230.40-45) - The dike will be constructed in the lake and on mudflats. The channel will be constructed within the lake. This impact should be minimal since there is no vegetation and little wildlife in these areas.

( X ) habitat for fish and other aquatic organisms - The Great Salt Lake does have a small population of fish in the fringe areas where the water is either fresh or just slightly brackish. Also there is a population of brine shrimp that are periodically harvested for commercial use. However, due to the location of the project there should not be an additional impact to these aquatic organisms.

( X ) wildlife habitat (breeding, cover, food, travel, general) - Shorebirds historically utilized the east side of the Great Salt Lake, and the North Arm was probably never very important to their status during migration and breeding seasons. Shorebirds are ground nesters associated with freshwater wetland habitats around the lake. No such habitat exists within the project area. This impact will be minimal.

( X ) endangered or threatened species - There are no endangered and threatened species which occur in the general vicinity of the project area. Both peregrine falcons and golden eagles fly over the project area; however, the project should not have an impact on them.

( X ) biological availability of possible contaminants in dredged or fill material, considering hydrography in relation to known or anticipated sources of contaminants; results of previous testing of material from vicinity of the project;



known significant sources of persistent pesticides from land runoff or percolation; spill records for petroleum products or designated (Section 311 of the CWA) hazardous substances; other public records of significant introduction of contaminants from industries, municipalities or other sources - The materials that would be used will be clean dredged and fill material. Approximately 3,000,000 cubic yards of dredged material from the under water channel will be discharged into the Great Salt Lake 2000 feet from the channel centerline. Approximately 750,000 cubic yards of clean borrow material will be required for the dike. Clean material will be borrowed from Strong's Knob and the Finger Point area. This material will be used for the construction of the 8.5 mile dike.

E. Human use characteristics and impacts (check applicable blocks and provide concise description of impacts for proposed action and alternatives):

( X ) existing and potential water supplies, water conservation - The project should not effect the water supply and there are no culinary water supply intakes at or near the project area.

( X ) recreational or commercial fisheries - The Great Salt Lake is the most important commercial source of brine shrimp eggs in the world. With the 350 foot openings in the dredged material that would be placed 2000 feet from the centerline of the channel, there should be a minimal impact to brine movement in the lake. The applicant will provide access to other shrimpers that now use these areas for shrimping.

( X ) other water related recreation - Other recreational activities include boating, tourism and water skiing. Again, at this location there is very little recreational use, therefore, the impacts on recreation should be minor.

( X ) aesthetics of the aquatic ecosystem - The placement of fill material would alter the aesthetics of the project area. The completion of this project would transform an area of open water and mudflats to a 8.5 mile dike. This fill will give the area a distinct manmade appearance.

( ) parks, national and historic monuments, national seashores, wild and scenic rivers, wilderness areas, research sites, etc. -

( ) traffic/transportation patterns -

( ) navigation -

( ) safety -



( X ) air quality - During construction the emissions from equipment would degrade air quality but this impact would be minor and temporary.

( X ) noise - The equipment would effect the ambient noise level during construction work but this impact would be minor and temporary.

( X ) historic properties (Section 301(5) National Historic Preservation Act) - There are no known sites within the project area that are eligible for listing in the National Register of Historic Places.

( X ) land use classification - The land use classification of the project area would not change.

( X ) economics - The construction of the project would create jobs, and wages. The Great Salt Lake Minerals and Chemicals Corp. purpose for the project is compensate for dilution of the north arm lake brine because of the breach in the railroad causeway and for GSLM to maintain profitable operations. This would be an economic benefit for Great Salt Lake Minerals and Chemicals Corporation.

( ) prime and unique farmland (7 CFR Part 658) -

( ) food and fiber production -

( X ) general water quality - The general water quality of the area will not be adversely affected by the project. The fill material consists of clean fill. During dredging of the channel and construction of the dike there will be turbidity. This impact will be minor and temporary.

( X ) mineral needs - The concentrated brine would be pumped to GSLM's existing solar pond complex for production of sulfate of potash ( $K_2SO_4$ ) and other minerals.

( X ) consideration of private property - The land surrounding the project area is owned by the state. This project will not impact private property. The applicant would use the U.S. Bureau of Land Management's property to access the project site.

( ) other -

F. Summary of secondary and cumulative effects of proposed action and alternatives: The secondary and cumulative negative impacts marked above and other similar impacts should not be significant when work is done in accordance with the conditions and best management practices. Since the work will be done on state land and the area is leased to GSLM no other fill projects are anticipated in this area. In the future the channel may require maintenance dredging to keep it clear and allow the



concentrated brine to move towards the pump. Again this should only have a minor negative environmental impact.

### III. Findings:

#### A. Other authorizations:

##### (1) Water quality certification:

Date 3/27/91 issued X denied \_\_\_\_\_ waived \_\_\_\_\_

Special Conditions Yes \_\_\_\_\_ No X (If yes see attached

##### (2) State and/or local authorizations (if issued):

B. A complete application was received on 2/12/91. A public notice describing the project was issued on 2/20/91, and sent to all interested parties (mailing list) including appropriate state and Federal agencies. All comments received on this action have been reviewed and are summarized below.

#### 1. Summary of comments received:

##### (a) Federal agencies:

i) U.S. Environmental Protection Agency. The U.S. Environmental Protection Agency stated in a telephone conversation on April 24, 1991 that they had no problem with issuance of the permit as proposed.

ii) U.S. Fish and Wildlife Service - The U.S. Fish and Wildlife Service stated in their letter dated March 29, 1991 that the following stipulations be included as a condition of the permit if we would issue a permit.

1. All previous commitments to mitigate for impacts resulting from previous 404 work be completed before beginning work on this project proposal.

2. Questions regarding the impact to brine shrimp production and the related industry, as brought forth by the Utah Division of Wildlife Resources, be answered.

(b) State and local agencies: The Division of State History has indicated that there are no prehistoric or historic sites that have been recorded within the project area.

(c) The Division of Wildlife Resources stated in their letter dated March 11, 1991 that the proposed diking and canal could have serious impacts on the brine shrimp. They wanted the following questions answered before a permit would be issued.



1. What effect is the dredged material going to have on the culverts that allow water flow from the north and south arms.
2. What effect will the project have on the flooding potential on the south end and the impact to the railroad causeway.
3. Both peregrine falcons and golden eagles are found in the area. It is unknown at this time what impact this project would have on these species' food base.

(d) Utah Geological and Mineral Survey (UGMS) stated in a letter dated April 2, 1991 that they had several questions and issues. Mr. Peter Behrens of Great Salt Lake Minerals and Chemicals Corp. contacted UGMS. As a result of their conservation, UGMS's questions have been answered, and their issues addressed, both to their satisfaction.

(e) Bureau of Land Management stated in their letter dated March 11, 1991 that one comprehensive document must be prepared which will address the impacts to public lands, as well as all other issues associated with the proposal.

(f) Division of State Lands and Forestry stated in their letter dated March 15, 1991 that they recommend the following comments for the State's sovereign land:

1. The installation of the underwater channel does not impair navigation of the lake.
2. The construction of the solar evaporation dikes and access road do not close water movement to the West Desert pump.
3. The Great Salt Lake Minerals and Chemicals Corp. should complete the lease application it has on file with the Division prior to doing any work on sovereign land.

(d) Organizations:

(e) Individuals: The following individuals and companies commented on this public notice: Morton Salt, AKZO Salt, JAW Brine Shrimping, Inc., Salt Lake Brine Shrimp, Sanders Brine Shrimp Company, Barbara Schwarz, and James R. Palmer

These where their concerns and interests:

1. They felt that the proposed channel across the entire width of the north arm of the Great Salt Lake may interfere with the natural interchange of brine between the north and south arms of the lake.
2. Shrimpers would have problems getting access to the areas they now shrimp.
3. The construction of the dike would cut off water access to the Great Salt Lake pumping station.
4. That the channel would impact a submarine village within the Great Salt Lake. *what-?*

2. Evaluation:



I have reviewed and evaluated, in light of the overall public interest, the documents and factors concerning this permit application as well as the stated views of other interested agencies and the concerned public. In doing so, I have considered the possible consequences of this proposed work in accordance with regulations published in 33 CFR Part 320 to 330 and 40 CFR Part 230. The following paragraphs include my evaluation of comments received and how the project complies with the above cited regulations.

(a) Consideration of comments: The different agencies, companies and individuals had mostly the same concerns which were:

1. That all previous commitment to mitigate for impacts resulting from previous 404 work be completed before beginning work on this project proposal. Two permits were issued to the GSLM. Permit No. 7651 was not constructed and there have not been impacts to wetlands or the Great Salt Lake. The permittee will not have to mitigate for this project till it has been started. Permit No. 9622 was constructed and all special conditions complied with. The applicant will not need any other mitigation before starting the new proposed project.
2. Will the reintroduced sediments from the channel dredging operation influence the natural flow of deep, dense north-arm brines from moving towards and ponding against the railroad causeway structure? The applicant will place the dredged material approximately 2000 feet from the centerline of the channel. The material will not be placed for 350 feet every 3000 feet for 5 miles at the deepest part of the project. This would leave opening's throughout the 5 miles of the dredged fill where the dense north-arm brines would move towards causeway structure. The causeway was constructed with sand and rock. South Arm brine flow into the North Arm, both through the existing culverts and through the permeable or porous Railroad Causeway itself. The flow of brine through the fill and culverts is controlled primarily by the lake altitude and the stage and density differences across the causeway. Only conditions similar to those experienced in 1982 through 1985 are likely to be sufficient to cause a return to a chemically stratified North Arm. The 1982-1985 hydrologic situation is not likely to recur during the next couple of decades. Consequently, chemical stratification in the North Arm in the near future is highly unlikely.
3. What effect's will the dredged material have on the culverts that allow water flow from the north and south arms. The fill dredged material will be placed 2000 feet from the centerline of the channel and away from the culverts. There should not be any impact on culverts.
4. What effect will the project have on the railroad causeway. The channel will be constructed away from the railroad causeway. The project will not impact the causeway.



5. Will the installation of an underwater channel impair navigation of the lake. Since the channel will be deeper and the dredged material will change the elevation of the lake bottom 2 to 3 feet there should not be impacts on navigation.

6. The Great Salt Lake Minerals and Chemicals Corp. should complete the lease application it has on file with the Division prior to doing any work on sovereign land. A lease application has been submitted to the Division of Lands and Forestry.

7. There was one person who commented that this project would impact a submarine village within the Great Salt Lake. There is no information indicating that there is a submarine village within the Great Salt Lake so these comments will not be considered.

Two meetings were held to resolve any concerns or answer any questions. All questions and concerns were answered. Two concerns were stated which we will have special conditions for.

1. Dredged material will not be placed at for 350 feet every 3000 feet for 5 miles at the deepest part of the project. This will lessen the impacts on circulation patterns along the fill material parallel to the channel.

2. Great Salt Lake Mineral and Chemicals will provide access to shrimpers which now use these waters for shrimping. The new dike will be used for access of these waters. This is to provide access to shrimpers.

3. That Great Salt Lake Minerals and Chemicals shall submit "as built drawings of the completed work to the Army Corps of Engineers 3 months after the work is completed. This is to show the work is in compliance with the plans.

4. The permittee will contact Mr. Anthony Vigil of the Utah Regulatory Office, two weeks before construction starts to set up a pre-construction meeting. This meeting will clarify any questions and determine boundaries of fill to be placed.

(b) Evaluation of Compliance with 404 (b) (1) guidelines (restrictions on discharge, 40 CFR 230.10). (A check in a block denoted by an asterisk indicates that the project does not comply with the guidelines.) \*

i. Alternatives test:

\*

	<u>X</u>
Yes	No

- 1) Based on the discussion in II B, are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the United States" or at other locations within



these waters?

<u>X</u>	*	
Yes	No	NA

- 2) Based on II B, if the project is in special aquatic site and is not water-dependent, has the applicant clearly demonstrated that there are no practicable alternative sites available?

\*

<u>X</u>	
Yes	No

\*

ii. Special restrictions. Will the discharge:

- 1) violate state water quality standards?

- 2) violate toxic effluent standards under Section 307 of the Act?

<u>X</u>	
Yes	No

\*

- 3) jeopardize endangered or threatened species or their critical habitat?

<u>X</u>	
Yes	No

\*

- 4) violate standards set by the Department of Commerce to protect marine sanctuaries?

<u>X</u>	
Yes	No

- 5) Evaluation of the information in II C and D above indicates that the proposed discharge material meets testing exclusion criteria for the following reason(s)?

( X ) based on the above information, the material is not a carrier of contaminants. This area of the Great Salt lake does not have contaminants from industry as do the Jordan River and Utah Lake.

( ) the levels of contaminants are substantially similar at the extraction and disposal sites and the discharge is not likely to result in degradation of the disposal site and pollutants will not be transported to less contaminated areas.

( ) acceptable constraints are available and will be implemented to reduce contamination to acceptable levels within the disposal site and prevent contaminants from being transported beyond the boundaries of the disposal



site

iii. Other restrictions. Will the discharge contribute either individually or collectively to significant degradation of "waters of the U.S." through adverse impacts to:

\*  
\_\_\_\_\_  
Yes      X  
          No

a) human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife and special aquatic sites?

\*  
\_\_\_\_\_  
Yes      X  
          No

b) life stages of aquatic life and other wildlife?

c) diversity, productivity and stability of the aquatic ecosystem, such as loss of

\*  
\_\_\_\_\_  
Yes      X  
          No

fish or wildlife habitat, or loss of the capacity of wetland to assimilate nutrients, purify water or reduce water or reduce wave energy?

\*  
\_\_\_\_\_  
Yes      X  
          No

d) recreational, aesthetic and economic values?

\*  
X  
Yes      X  
          No

iv. Actions to minimize potential adverse impacts (mitigation). Will all appropriate and practicable steps (40 CFR 230.70-77) be taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?

(c) General Evaluation (33 CFR 320.4(a)):

(1) The relative extent of the public and private need for the proposed work: The private need is to construct 20 miles of channel and 8.5 miles of dike. This would concentrate the brine from the Great Salt Lake in the new pond expansion by solar evaporation and flow the concentrated brine in the underwater channel across the lake to the GSLM existing pump station for feed to GSLM's existing solar pond complex for production of sulfate of potash and other minerals. This work is required to compensate for dilution of the north arm lake brine because of the breach in the railroad causeway and for GSLM to maintain the same level of profitable operations.

(2) The practicability of using reasonable alternative structure or work: As previously outlined in Section IIB there are no other practicable locations. The purpose is to concentrate the brine from the Great Salt Lake in the new pond and flow it across the lake to existing ponds. There are other



locations to the south or the north where the channel could have been constructed however, the impacts would have been the same. The only other alternative mentioned would be to pump the brine through a pipeline to the evaporation ponding system. This would require additional initial and long term expense. Although this may be practicable the negative environmental impacts for either alternative are minimal. Therefore, the channel dredging alternative is also a reasonable alternative.

(3) The extent and permanence of the beneficial and/or detrimental effects that the proposed structures or work may have on the public and private uses to which the area is suited:

The project is located within the Great Salt Lake and the dike would be constructed on mudflats. Some around the used for The lake is used for brine shrimping. The beneficial impacts will be that the concentrated brine can be recovered and a profitable operation maintained. This should be a long term benefit. The detrimental effect of an increase of turbidity should only be temporary as it will dissipate shortly after the work is completed. There will also be permanent changes to the substrate, circulation patterns and baseflow however, these impacts should not have detrimental effect on the environment or the aquatic ecosystem.

(d) Significant national issues of overriding importance to state or local issues and why. There are no direct concerns of national overriding importance associated with this project.

### 3. Determinations:

(a) Finding of No Significant Impact (FONSI) (33 CFR Part 325). Having reviewed the information provided by the applicant, all interested parties and the assessment of environmental impacts contained in Part II B of this document, I find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

(b) 404(b)(1) Compliance/Non-compliance Review (40 CFR 230.12).

( ) The discharge complies with the guidelines.

( X ) The discharge complies with the guidelines, with the inclusion of the appropriate and practicable conditions listed above (in II.B.(5)) to minimize pollution or adverse effects to the affected ecosystem.

( ) The discharge fails to comply with the requirements of these guidelines because:

( ) There is a practicable alternative to the proposed discharge that would have less adverse effect on the aquatic ecosystem and that alternative does not have other



significant adverse environmental consequences.

- ( ) The proposed discharge will result in significant degradation of the aquatic ecosystem under 40 CFR 230.10(b) or (c).
- ( ) The discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem, namely...
- ( ) There is not sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with the guidelines.

(c) Public interest determination: I find that issuance of a Department of the Army permit with conditions as prescribed by regulations published in 33 CFR Parts 320 to 330, and 40 CFR Parts 230 is not contrary to the public interest:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Anthony Vigil  
Project Manager

\_\_\_\_\_  
Date

\_\_\_\_\_  
Recommending Approval  
Brooks Carter

\_\_\_\_\_  
Date

\_\_\_\_\_  
Approving Official  
Art Champ  
Chief, Regulatory Section